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EXAMINER

SOBUTKA, PHILIP

ART UNIT

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/849,604	Applicant(s) CHARY, RAM V.	
	Examiner PHILIP J. SOBUTKA	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10, 13, 14 and 19 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 11, 12, 15-18 and 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 2,7,8,13,14, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl et al (US, 7,099,689) in view of Billstrom (US 5,983,101).

Consider claim 1. Bahl teaches a system, comprising:

an antenna (figure 1, items 166,176, column 4, lines 18-20) ;

a radio management module to connect to said antenna (see for example figure 1, item 110, figure 4 column 10, lines 8-20), said radio management module to comprise:

a set of application modules 1-M (see figure 4, items 428);

a set of radios 1-N (see figure 1, item 150, column 4, lines 10-18, 53-64); and a power management module to connect to said application modules 1-M and said radios 1-N, said power management module to receive a request for a data connection from one of said application modules 1-M, select a data connection radio from said set of radios 1-N in accordance with a radio selection policy, and establish said data connection using said data connection radio (see for example column 2, lines 59-68, column 7, lines 59-68).

As to the claim limitation regarding the connection rules being based on a minimum bandwidth requirement, note that it would seem obvious on its face that the rules would ensure the minimum bandwidth required for communication. Note that Bahl teaches the selection rules ensure “proper balance is maintained between energy consumption and wireless network communications bandwidth” (column 3, lines 1-3). Nevertheless Bahl lacks a specific teaching of the rules being based on a minimum bandwidth requirement.

Billstrom teaches that a consideration for adequate radio link communication is providing minimum bandwidth (Billstrom, see for example Figure 4A box 406, column 6, lines 38-44, column 9, lines 18-28). Therefore it would have been obvious to one of ordinary skill to modify the management of Bahl to ensure minimum bandwidth as taught by Billstrom in order to ensure appropriate bandwidth for the link, while minimizing the usage of total available bandwidth on the system.

Consider claim 2. Bahl teaches the system of claim 1, wherein said radio selection policy comprises a set of rules to select said data connection radio based on a power source for said radios (note that the rules are based on the level of the battery see column 2, lines 59-68, column 7, lines 59-68).

Consider claim 7. Bahl teaches an apparatus, comprising:
a set of application modules 1-M (see figure 4, items 428);
a set of radios 1-N (see figure 1, item 150, column 4, lines 10-18, 53-64); and
a power management module to connect to said application modules 1-M and said radios 1-N, said power management module to receive a request for a data connection from one of said application modules 1-M, select a data connection radio from said set of radios 1-N in accordance with a radio selection policy, and establish said data connection using said data connection radio (see for example column 2, lines 59-68, column 7, lines 59-68).

Consider claim 8. Bahl teaches the apparatus of claim 7, wherein said radio selection policy comprises a set of rules to select said data connection radio based on a power source for said radios (see for example column 2, lines 59-68, column 7, lines 59-68).

As to the claim limitation regarding the connection rules being based on a minimum bandwidth requirement, note that it would seem obvious on its face that the rules would ensure the minimum bandwidth required for communication. Note that Bahl teaches the selection rules ensure “proper balance is maintained between energy

consumption and wireless network communications bandwidth” (column 3, lines 1-3). Nevertheless Bahl lacks a specific teaching of the rules being based on a minimum bandwidth requirement.

Billstrom teaches that a consideration for adequate radio link communication is providing minimum bandwidth (Billstrom, see for example Figure 4A box 406, column 6, lines 38-44, column 9, lines 18-28). Therefore it would have been obvious to one of ordinary skill to modify the management of Bahl to ensure minimum bandwidth as taught by Billstrom in order to ensure appropriate bandwidth for the link, while minimizing the usage of total available bandwidth on the system.

Consider claim 13. Bahl teaches a method, comprising: receiving a request for a data connection from an application executed by a wireless device; selecting a data connection radio from at least two radios accessible by said wireless device in accordance with a radio selection policy; and establishing said data connection using said data connection radio (see for example column 2, lines 59-68, column 7, lines 59-68).

As to the claim limitation regarding the connection rules being based on a minimum bandwidth requirement, note that it would seem obvious on its face that the rules would ensure the minimum bandwidth required for communication. Note that Bahl teaches the selection rules ensure “proper balance is maintained between energy consumption and wireless network communications bandwidth” (column 3, lines 1-3).

Nevertheless Bahl lacks a specific teaching of the rules being based on a minimum bandwidth requirement.

Billstrom teaches that a consideration for adequate radio link communication is providing minimum bandwidth (Billstrom, see for example Figure 4A box 406, column 6, lines 38-44, column 9, lines 18-28). Therefore it would have been obvious to one of ordinary skill to modify the management of Bahl to ensure minimum bandwidth as taught by Billstrom in order to ensure appropriate bandwidth for the link, while minimizing the usage of total available bandwidth on the system.

Consider claim 14. Bahl teaches the method of claim 13, wherein said radio selection policy comprises a set of rules to select said data connection radio based on a power source for said radios (see for example column 2, lines 59-68, column 7, lines 59-68).

Consider claim 19. Bahl teaches an article comprising: a storage medium; said storage medium including stored instructions that, when executed by a processor (note that Bahl teaches the multi radio arrangement being stored as instructions on storage media see for example column 10, lines 34-46), are operable to receive a request for a data connection from an application executed by a wireless device, select a data connection radio from at least two radios accessible by said wireless device in accordance with a radio selection policy, and establish said data connection using said data connection radio (see for example column 2, lines 59-68, column 7, lines 59-68).

As to the claim limitation regarding the connection rules being based on a minimum bandwidth requirement, note that it would seem obvious on its face that the rules would ensure the minimum bandwidth required for communication. Note that Bahl teaches the selection rules ensure “proper balance is maintained between energy consumption and wireless network communications bandwidth” (column 3, lines 1-3). Nevertheless Bahl lacks a specific teaching of the rules being based on a minimum bandwidth requirement.

Billstrom teaches that a consideration for adequate radio link communication is providing minimum bandwidth (Billstrom, see for example Figure 4A box 406, column 6, lines 38-44, column 9, lines 18-28). Therefore it would have been obvious to one of ordinary skill to modify the management of Bahl to ensure minimum bandwidth as taught by Billstrom in order to ensure appropriate bandwidth for the link, while minimizing the usage of total available bandwidth on the system.

2. Claims 3, 4,9,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl in view of Billstrom and in view of Tada (US 7020467).

Consider claim 3. Bahl in view of Billstrom teaches the system of claim 1, but lacks a teaching of further comprising a power source interface to connect to the power management module, said power source interface to indicate a connection to an external power source or an internal power source. Tada teaches a battery power device with which signals whether the power supply is internal or external, note that Tada’s external power is AC while the internal battery is DC (Tada figure 14, column 11, lines 45-55, column 12, and lines 20-50). It would have been obvious to one of

ordinary skill in the art to modify Bahl in view of Billstrom to use the power monitor of Tada in order to determine whether power usage should be minimized.

4. Bahl in The system of claim 3, wherein said external power source comprises an alternating current power supply, and said internal power source comprises a direct current power supply (note that Tada's external power is AC while the internal battery is DC, Tada figure 14, column 11, lines 45-55).

Consider claim 9. Bahl in view of Billstrom teaches the apparatus of claim 7, but lacks a teaching of further comprising a power source interface to connect to said power management module, said power source interface to indicate a connection to an external power source or an internal power source. Tada teaches a battery power device with which signals whether the power supply is internal or external, note that Tada's external power is AC while the internal battery is DC (Tada figure 14, column 11, lines 45-55, column 12, lines 20-50). It would have been obvious to one of ordinary skill in the art to modify Bahl in view of Billstrom to use the power monitor of Tada in order to determine whether power usage should be minimized.

Consider claim 10. Bahl in view of Billstrom and in view of Tada teaches the apparatus of claim 9, wherein said external power source comprises an alternating current power supply, and said internal power source comprises a direct current power supply (note that Tada's external power is AC while the internal battery is DC, Tada figure 14, column 11, lines 45-55).

Allowable Subject Matter

3. Claims 5,6,11, 12, 15-18, and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 5. The nearest prior art as shown in Bahl fails to teach the system of claim 3, wherein said power management module selects said data connection radio using a set of radio bandwidth values corresponding to said radios 1-N if said power source interface indicates a connection to an external power source.

Consider claim 6. The nearest prior art as shown in Bahl fails to teach the system of claim 3, wherein said power management modules selects said data connection radio using a set of radio power cost values corresponding to said radios 1-N if said power source interface indicates a connection to an internal power source.

Consider claim 11. The nearest prior art as shown in Bahl fails to teach the apparatus of claim 9, wherein said power management module selects said data connection radio using a set of radio bandwidth values corresponding to said radios 1-N if said power source interface indicates a connection to an external power source.

Consider claim 12. The nearest prior art as shown in Bahl fails to teach the apparatus of claim 9, wherein said power management modules selects said data

connection radio using a set of radio power cost values corresponding to said radios 1-N if said power source interface indicates a connection to an internal power source.

Consider claim 15. The nearest prior art as shown in Bahl fails to teach the method of claim 13, wherein selecting said data connection radio comprises: retrieving a radio bandwidth value and a radio power cost value for each radio; determining whether said radios are using an external power source or an internal power source; selecting said data connection radio using said radio bandwidth values if said radios are using said external power source; and selecting said data connection radio using said radio power cost values if said radios are using said internal power source.

Consider claim 20. The nearest prior art as shown in Bahl fails to teach the article of claim 19, wherein the stored instructions, when executed by a processor, select said data connection radio using stored instructions operable to retrieve a radio bandwidth value and a radio power cost value for each radio, determine whether said radios are using an external power source or an internal power source, select said data connection radio using said radio bandwidth values if said radios are using said external power source, and select said data connection radio using said radio power cost values if said radios are using said internal power source.

Response to Amendment

4. Applicant's arguments with respect to claims 1-4, 7-10, 13, 14, 19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177.

9. The central fax phone number for the Office is 571-273-8300.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number.

CENTRALIZED DELIVERY POLICY: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip J Sobutka/
Primary Examiner, Art Unit 2618

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